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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/733,028	12/11/2003	Hiroyuki Doi	60911-00003USPX	7487

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EXAMINER

LEUNG, PHILIP H

ART UNIT PAPER NUMBER

3742

DATE MAILED: 01/26/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

8N

Office Action Summary	Application No. 10/733,028	Applicant(s) DOI ET AL.	
	Examiner Philip H Leung	Art Unit 3742	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>6-25-2004</u> . | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

1. Applicant's election without traverse of Figure 1 and claims 1-9 in the reply filed on 11-8-2004 is acknowledged. However, upon reconsideration by the undersigned Examiner, it is determined that the two species are not patentably distinct as Figures 1 and 7A differ only in the grounding of the two terminals. It is well known in the art of power supply systems that one of the two terminals of a power supply should be grounded and either terminal could be grounded in an alternating current power supply. Therefore, the species election requirement made on 10-5-2004 is hereby withdrawn and all the claims, claims 1-18 are to be considered on the merits together.

2. The drawings filed 12-11-2003 are acceptable.

3. In the specification, at page 35, lines 4-9, it is stated "In the second embodiment, the output terminal t1 of the high-frequency power source HFS is set to a non-stable potential, and the output terminal t2 is grounded and set to a stable potential, as shown in Figs. 7A and 8. The matching circuit MC, the high-frequency transmission line HTW, and the power lines 9a and 9b shown in Fig. 1 are eliminated", however, it can be seen from the drawings, Figure 8, "the matching circuit MC, the high-frequency transmission line HTW, and the power lines 9a and 9b shown in Figures 1 and 4" are not eliminated in the second embodiment as shown in Figures 7A and 8. Clarification and correction are suggested.

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4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1-18 are rejected under 35 U.S.C. 102(b) as being anticipated by Yokozeki (US 2002/0125244) (cited by the applicant).

Yokozeki shows an image forming apparatus for use with a recording medium, the image forming apparatus comprising: an image forming unit for forming a toner image on the recording medium; a fixing device for transporting the recording medium bearing the toner image and fixing the toner image on the recording medium, the fixing device including: a pressure roller; and an induction heating roller device (see Figures 1-15) including a heating roller TR arranged in pressure contact with the pressure roller, wherein the heating roller transports the recording medium bearing a toner image by holding the recording medium with the pressure roller and fixes the toner image on the recording medium (see Figures 23 and 24), the heating roller TR heated by an induction device having high frequency power supply HFG and a plurality of induction coils IC (WP1, WP2, WP3) and one of the terminal of the HFG is grounded forming the terminal with a stable potential (see Figures 11-13 and paragraphs [0164] – [176]). The grounding of either terminal is met by Yokozeki as the terminals are only different in name, first terminal or second terminal.

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6. Claims 1, 2, 4, 5, 7, 8, 10, 11, 13, 14, 16 and 17 are rejected under 35 U.S.C. 102(e) as being anticipated by Tanaka et al (US 2003/0213799 A1) (cited by the applicant).

The applied reference has a common inventor with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

As shown in Figures 1-8, Tanaka shows an image forming apparatus for use with a recording medium, the image forming apparatus comprising: an image forming unit for forming a toner image on the recording medium; a fixing device for transporting the recording medium bearing the toner image and fixing the toner image on the recording medium, the fixing device including: a pressure roller; and an induction heating roller device HR (Figure 2) including a heating roller 8 arranged in pressure contact with the pressure roller, wherein the heating roller transports the recording medium bearing a toner image by holding the recording medium with the pressure roller and fixes the toner image on the recording medium, the induction heating roller device further including: a plurality of induction coils ICa, ICb, ICc, ICd (Figure 7) (or IC1, IC2, IC3 of Figure 8) arranged in the heating roller so as to be separated in the axial direction, wherein the heating roller is magnetically coupled with each induction coil for heating by induction current, and the plurality of induction coils include a pair of induction coils with one induction coil of the pair arranged at one end of the heating roller and the other induction coil of the pair arranged at the opposite end of the heating roller, each of induction coils of the pair having a first end positioned nearer an end portion of the heating roller and a second end

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positioned nearer a central portion of the heating roller (see Figures 7 and 8); and a high-frequency power source for supplying high-frequency power to the plurality of induction coils, the high-frequency power source including a first output terminal 9a set at a stable potential and a second output terminal set at a non-stable potential 9b, with the first end of each of the pair of induction coils connected to the first output terminal, and the second end of each of the pair of induction coils connected to the second output terminal (see Figures 7 and 8 and also, paragraphs [0027], [0166] and [0197].

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

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8. Claims 3, 6, 9, 12, 15 and 18 are further rejected under 35 U.S.C. 103(a) as being unpatentable over Tanaka et al (US 2003/0213799 A1), in view of Yokozeki et al (US 2002/0125244 A1).

As set forth above, Tanaka shows every feature as claimed except for the explicit showing of the grounding of one of the terminals of the power supply as the terminal with the stable potential. Yokozeki shows an induction image forming device with a heating roller TR heated by an induction device having high frequency power supply HFG and a plurality of induction coils IC (WP1, WP2, WP3) and one of the terminal of the HFG is grounded forming the terminal with a stable potential (see Figures 11-13 and paragraphs [0164] – [176]). It would have been obvious to an ordinary skill in the art at the time of invention to modify Tanaka to ground the terminal with a stable potential for a more stable and safer power supply, in view of the teaching of Yokozeki.

9. Claims 1-18 are further rejected under 35 U.S.C. 103(a) as being obvious over Ohishi et al (US 2001/0015352 A1) (cited by the applicant), in view of Yokozeki et al (US 2002/0125244 A1).

Again, Ohishi shows an image forming apparatus for use with a recording medium, the image forming apparatus including an induction heating roller device including a heating roller 1 (see paragraphs [0122], [0123] and [0139]) and the induction heating roller device further including: a plurality of induction coils 21, 22, 31, 32 (Figures 14 and 24) arranged in the heating roller so as to be separated in the axial direction, wherein the heating roller is magnetically coupled with each induction coil for heating by induction current, and the plurality of induction

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coils include a pair of induction coils with one induction coil of the pair arranged at one end of the heating roller and the other induction coil of the pair arranged at the opposite end of the heating roller, each of induction coils of the pair having a first end positioned nearer an end portion of the heating roller and a second end positioned nearer a central portion of the heating roller; and a high-frequency power source for supplying high-frequency power to the plurality of induction coils, the high-frequency power source including a first output terminal with the first end of each of the pair of induction coils connected to the first output terminal, and the second end of each of the pair of induction coils connected to the second output terminal.

Therefore it can be seen Ohishi shows every feature as claimed except for the explicit showing of the grounding of one of the terminals of the power supply. Yokozeki shows an induction image forming device with a heating roller TR heated by an induction device having high frequency power supply HFG and a plurality of induction coils IC (WP1, WP2, WP3) and one of the terminal of the HFG is grounded forming the terminal with a stable potential (see Figures 11-13 and paragraphs [0164] – [176]). It would have been obvious to an ordinary skill in the art at the time of invention to modify Ohishi to ground one of the terminals forming a terminal with a stable potential for a more stable and safer power supply, in view of the teaching of Yokozeki.

10. The prior art made of record below is considered pertinent to applicant's disclosure:

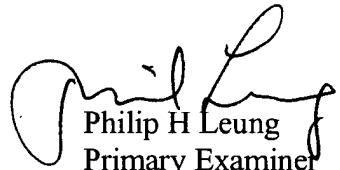
Kouno et al (US 5,832,354) is further cited to induction image fixing device with various features as claimed.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Philip H Leung whose telephone number is (571) 272-4782. The examiner can normally be reached on flexible.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robin Evans can be reached on (571) 272-4777. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Philip H Leung
Primary Examiner
Art Unit 3742

P.Leung/pl
1/19/2005